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Notes on the Japanese Species of the Genera *Tapinopa* and *Floronia* (Arachnida: Araneae: Linyphiidae: Micronetinae)

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Abstract It is shown in this study that the two linyphiids currently determined in Japan as *Tapinopa longidens* (WIDER, 1851) and *Floronia bucculenta* (CLERCK, 1758) are not conspecific with the European ones but represent different taxa, viz. *Tapinopa guttata* KOMATSU, 1937, sp. rev. = *Tapinopa octodenta* WUNDERLICH, 1995, n. syn. and *Floronia exornata* (L. KOCH, 1878) sp. rev., respectively.

For several years ago I noticed that there existed certain systematic differences in the figures of the male palp and the female epigyne of both *Tapinopa longidens* (WIDER, 1851) and *Floronia bucculenta* (CLERCK, 1758) drawn from the Japanese and also Korean specimens (*e. g.* OI, 1960; PAIK, 1965) compared with those made from European ones (*e. g.* WIEHLE, 1956; LOCKET & MILLIDGE, 1953; ROBERTS, 1987). This lead me to the assumption that the Japanese and also Korean specimens were not conspecific with the above mentioned species. When I finally got Japanese reference material of both species it became evident that my suspections were right as both species proved to be different from those of the European ones.

For both species there exist old names which have been currently placed as junior synonyms of the above mentioned species, viz. *Tapinopa guttata* KOMATSU, 1937 and *Floronia exornata* (L. KOCH, 1878). Although I have not been able to locate the types of these species which were both described from Japan it seems logical to suppose that *T. guttata* and *F. exornata* are correct names for the taxa dealt with in this paper.

WUNDERLICH and LI (1995) have quite recently described a new species, *Tapinopa octodenta* WUNDERLICH et LI, 1995, from China. The figures of the male palp and female epigyne given by them (WUNDERLICH & LI, 1995) for that species leave no doubt that it is a junior synonym of *T. guttata.*

Tapinopa guttata KOMATSU, 1937, sp. rev.

(Figs. 1, 4, 7, 10)

Tapinopa guttata KOMATSU, 1937: p. 162, pl. 11, figs. 1–4 (D♂ ♀) ——BRIGNOLI, 1983: 288 (placed as synonym of *T. longidens*).

Tapinopa longidens, OI 1960: p. 192, pl. 15, figs. 207–210 (♂, misidentification).——OI, 1964: p. 29, pl. 3, figs. 32–33 (♀, misidentification).——YAGINUMA 1977: p. 381 (*guttata* = *longidens*).——ZHU & TU, 1986: p. ?? (♂ ♀; misidentification).——CHIKUNI, 1989: p. 55, fig. 41 (♂ ♀; misidentification).

Tapinopa octodenta WUNDERLICH et LI, 1995: p. 337, figs. 9–17 (D♂ ♀), **n. syn.**——LI *et al.*, 1995: 231 (*longidens* sensu ZHU & TU, 1986 = *octodenta*).

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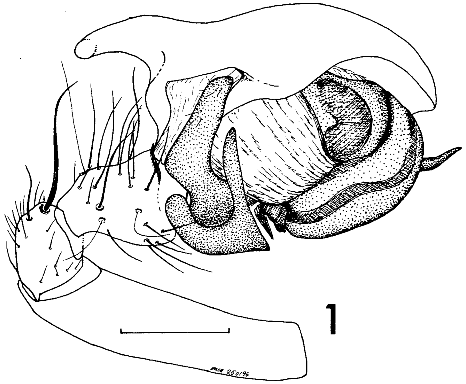

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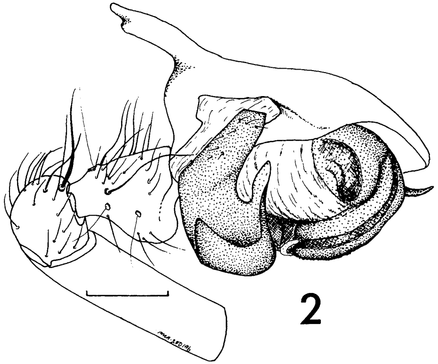

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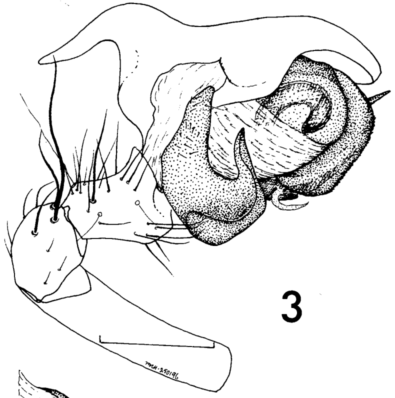

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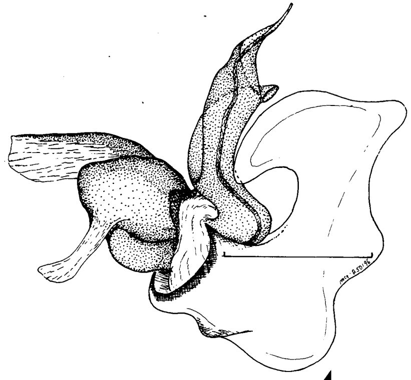

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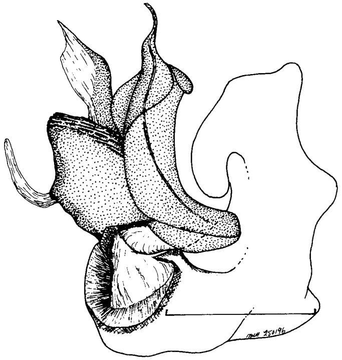

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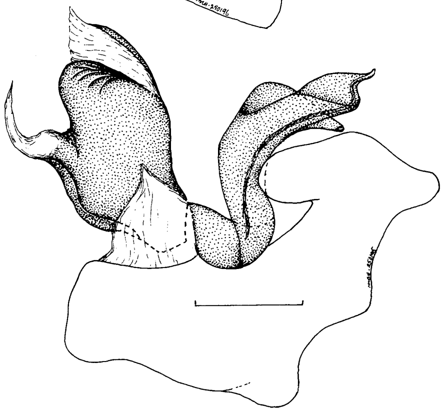

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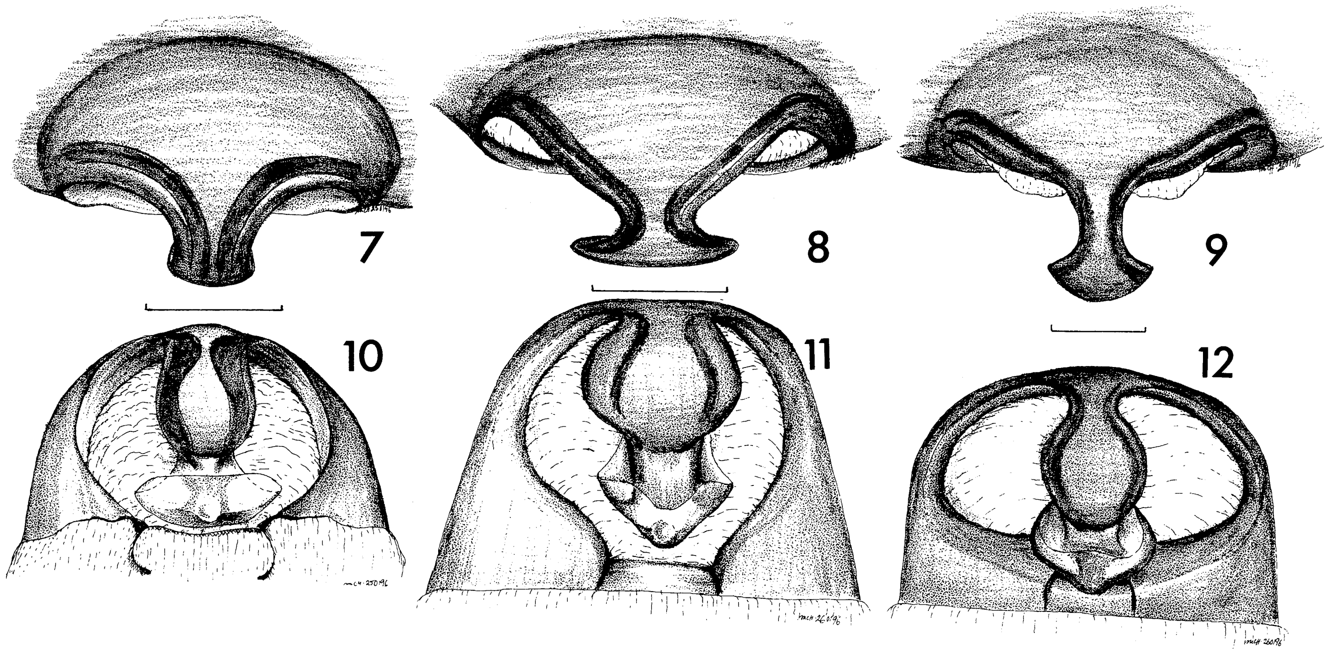
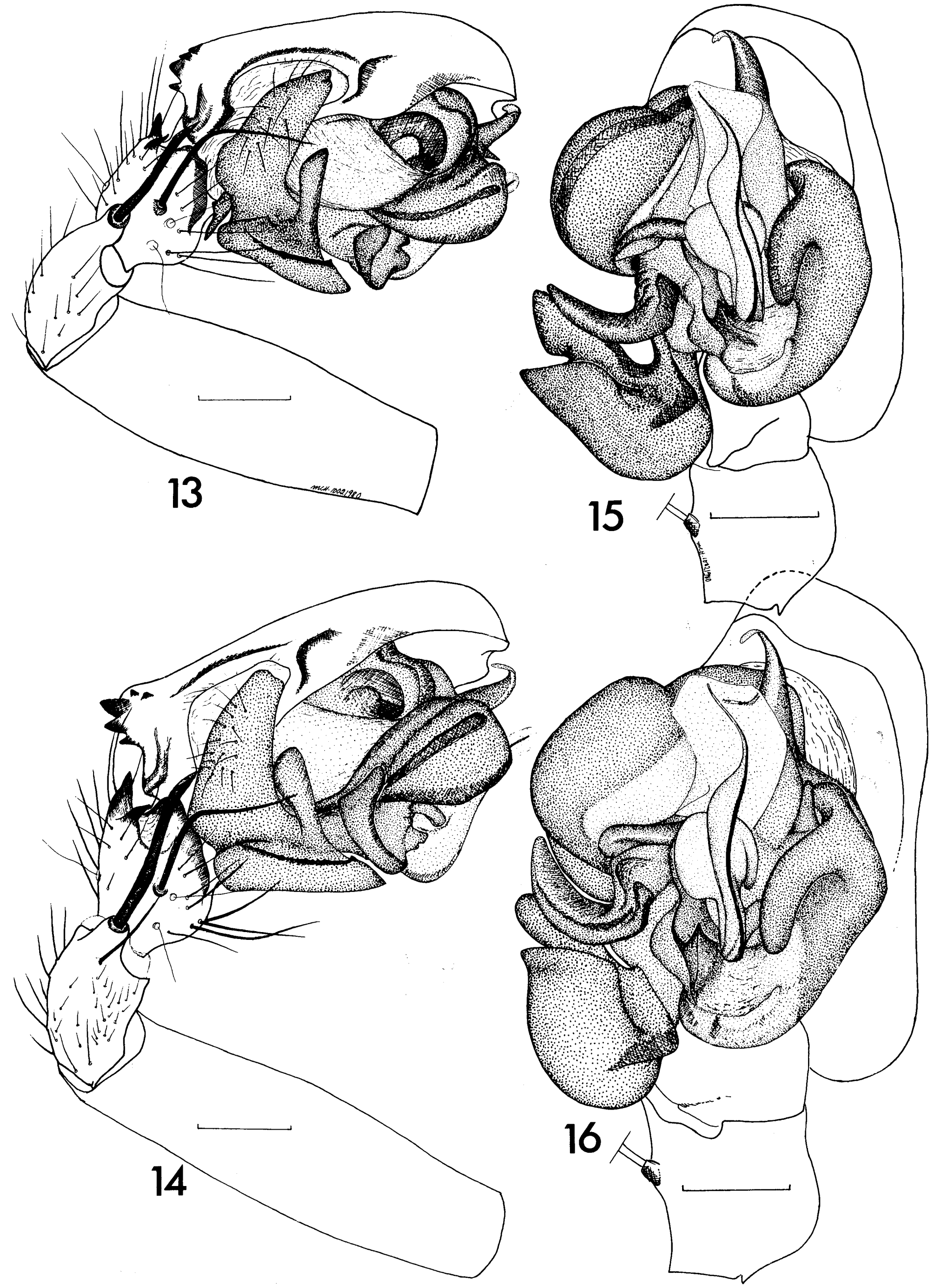
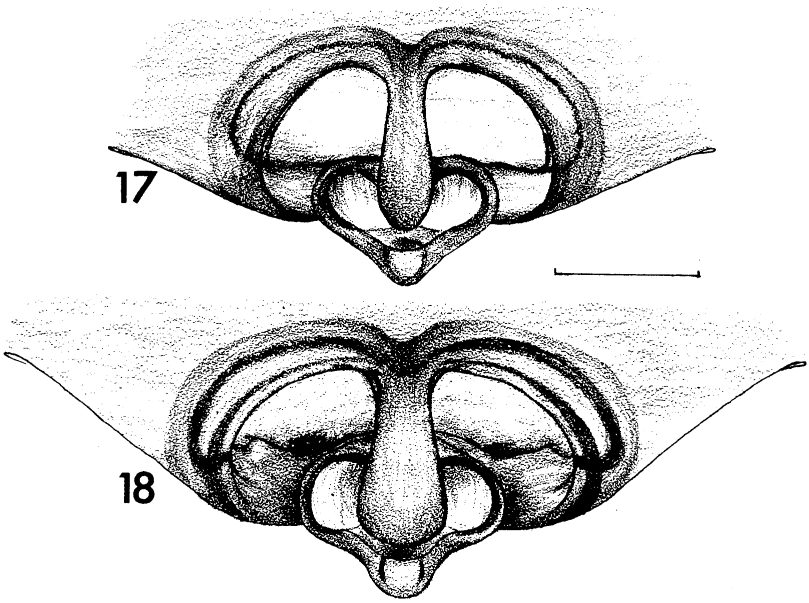


Figs. 1–6 (on page 2). *Tapinopa guttata* KOMATSU, 1937 (1, 4), *Tapinopa longidens* (WIDER, 1851) (2, 5), and *Tapinopa bilineata* BANKS, 1893 (3, 6).——1–3. Right male palp, laterally. 4–6. Right male palp, mesially. Orig. (Scale bars: 0.2 mm.)

Figs. 7–12. *Tapinopa guttata* KOMATSU, 1937 (7, 10), *Tapinopa longidens* (WIDER, 1851) (8, 11), and *Tapinopa bilineata* BANKS, 1893 (9, 12).——7–9. Epigyne, dorsally. 10–12. Epigyne, posteriorly. Orig. (Scale bars: 0.2 mm.)



Figs. 13–16. *Floronia bucculenta* (CLERCK, 1758) (13, 15) and *Floronia exornata* (L. KOCH, 1878) (14, 16).——13–14. Right male palp, laterally. 15–16. Right male palp, mesially. Orig. (Scale bars: 0.2 mm.)



Figs. 17–18. *Floronia bucculenta* (CLERCK, 1758) (17) and *Floronia exornata* (L. Koch, 1878) (18).——Epigyne, dorsally. Orig. (Scale bar: 0.2 mm.)

Diagnosis. Male of *T. guttata* may be recognized from all other *Tapinopa* males by having the backwards projecting cymbial horn only slightly bent with rounded apex; also the spine-like structure (which is part of the terminal apophysis) between paracymbium and tegulum is diagnostic. Female is recognized by having the lateral sides of the arched part of the scape more or less parallel. In other words it is not notably delated laterally.

Tapinopa guttata is fairly close both to the European *T. longidens* (Figs. 2, 5, 8, 11) and North American *T. bilineata* BANKS, 1893 (Figs. 3, 6, 9, 12) but in the former species the cymbial horn is clearly bifid and in the later one it is more bent and apically pointed. In both species the arched part of the scape in conspicuously dilated laterally although more so in *T. longidens.*

Description. The species have been well described by OI (1960 as *T. longidens*) and WUNDERLICH (1995 as *T. octodenta*).

Material examined. JAPAN: Nagano Pref., Matsumoto-shi near Lake Misuzuko, 1 ♂1♀, 22 August 1992, T. KAMURA leg. (MZT AM441).

Examined reference material. *T. longidens*: FINLAND: Parainen, Kurckas, 1♂1 ♀, 15 November 1967, M. SAARISTO leg. (MZT AM435) and SWEDEN: Öland, Resmo, 1♂, 1972, P.T. LEHTINEN & R. K. MANNILA leg. (MZT AM440). *T. bilineata*: USA, 1 ♂1♀ (MZT AM438).

Distribution: Japan and China: Liaoning and Hebei.

Floronia exornata (L. KOCH, 1878) sp. rev.

(Figs. 14, 16, 18)

Linyphia exornata L. KOCH, 1878: p. 746.
Floronia bucculenta, OI 1960: p. 192, pl. 17, figs. 225–230 (♂ ♀, misidentification).——PAIK 1965: p. 59, figs. 1–2 (♂ ♀, misidentification).

Diagnosis. Males of *F. exornata* are very close to those of *F. bucculenta* (Figs. 13, 15, 17) but may be recognized by the larger terminal apophysis and longer and slender apical part of the embolus. Females are recognized by having the arched part of the scape wider with more obtuse apex than in *F. bucculenta*.

Description. The species has been well described by OI (1960 as *F. bucculenta*).

Material examined. JAPAN: Tottori City, 1♂1♀, 9 September 1968, T. ARITA leg. (MZT AM447).

Examined reference material. FINLAND: Parainen, Sydmo, Ippos, 1♂1♀, 11 September 1966, M. SAARISTO leg. (MZT AM445).

Distribution. Japan and Korea.

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References

BRIGNOLI, P. M., 1983. A Catalogue of the Araneae Described between 1940 and 1981. 755 pp. Butler & Tanner Ltd, Frome and London.

CHIKUNI, Y., 1989. Pictorial Encyclopedia of Spiders in Japan. 310 pp. Kaisei-sha Publ. Co., Tokyo.

KOCH, L., 1878. Japanische Arachniden und Myriapoden. *Abh. zoll.-bot. Ges., Wien*, **1877**: 733–798.

KOMATSU, T., 1937. On the habit of *Tapinopa guttata* KISHIDA. *Acta arachnol.*, **2**: 162–168.

LOCKET, G. H., & A. F. MILLIDGE, 1953. British Spiders. Vol. 2. 449 pp. Ray Society, London.

OI, R., 1960. Linyphiid spiders of Japan. *J. Inst. Polyteshnics Osaka City Univ.*, **11**: 137–244, pl. 1–26.

——1964. A supplementary note on linyphiid spiders of Japan. *J. Biol., Osaka City Univ.*, **15**: 23–30, pls. 1–3.

PAIK, K. Y., 1965. Taxonomical studies on linyphiid spiders from Korea. *Educ. J. Teach. Coll. Kyungpook Univ.*, **3**: 58–76.

ROBERTS, M. J., 1987. The Spiders of Great Britain and Ireland. Vol. 2. Linyphiidae and Checklist. 204 pp. Harley Books, Essex.

WIEHLE, H., 1956. Spinnentiere oder Arachnoidea. X. 28. Familie Linyphiidae. *Tierw. Deutschlands*, **44**: 1–337.

WUNDERLICH, J., & S. LI, 1995. Three new species and one new genus (family Linyphiidae) from China (Arachnida: Araneae). *Beitr. Araneol.*, **4** (for 1994): 335–342.

YAGINUMA, T., 1977. A list of Japanese spiders (revised in 1977). *Acta arachnol.*, **27** (Spec. No.): 367–406.

ZHU, M. S., & H. S. TU, 1986. A study of linyphiid spiders from Shanxi and Hebei Provinces, China. *J. Hebei Normal Univ.* (*Nat. Sci. Ed.*), (2): 98–108.